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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,756	02/03/2004	Kyung-geun Lee	1293.1993	8918
49455 7590 12/15/2008 STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005				
EXAMINER				
ALUNKAL, THOMAS D				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/769,756

Applicant(s)

LEE, KYUNG-GEUN

Examiner

THOMAS D. ALUNKAL

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 7, 8, 22-25, 27-31 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 8, 22-25, 27-31 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 7, 8, 22-25, 27-31, and 33-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7, 8, 25, 27, 28, 31, 33, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda et al. (hereafter Shimoda)(US PgPub 2001/0006575) and in view of Ueda et al. (hereafter Ueda)(US PgPub 2001/0007545).

Regarding claim 1, Shimoda discloses a read-only optical information storage medium (Figure 2A, DVD-ROM) comprising a burst cutting area having a bar code (Figure 2A, Elements 4 and CM), a lead-in area (Figure 2A, Element LIM), a data area (Figure 2A, Element DAM), and a lead-out area (Figure 2A, Element LOM), in which data is recorded in the form of pits (Figure 2A, Element PT), wherein a pattern comprising a sequence of the pits is repeated in an area of the burst cutting area and the pattern comprising the sequence of pits is not the bar code (Paragraphs 0094-0096 and Figure 2A, Elements CM (which corresponds to a bar code) and repeated PT (which corresponds to sequences of pits) are both present in the BCA area). Shimoda

does not specifically disclose where the sequences of pits repeated in the BCA are identical patterns that are repeatedly formed. In the same field of endeavor, Ueda discloses an optical recording medium (Figure 1A), where identical control information data (represented by a series of pits) is repeatedly recorded in a specific area of the optical recording medium (Paragraphs 0038-0039).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide identical control information data being repeatedly recorded as disclosed by Ueda to the start information in the BCA of Shimoda (represented by PT), motivation being to allow for a re-read of specific start information in another area of the BCA when a first read operation fails, which results in a more reliable and efficient start operation.

Regarding claim 7, Shimoda discloses wherein at least one of the burst cutting area, the lead-in area, the data area, and the lead-out area is divided into a plurality of sub-areas in each of which pits are formed in different pits patterns (Figure 2A, LIM which is divided into a plurality of sub-areas).

Regarding claim 8, Shimoda discloses wherein the lead-in area comprises first and second areas (Figure 2A, LIM), pits are formed in the first area in one of a third straight pit pattern and a third pit wobble pattern, and pits are formed in the second area in one of a fourth straight pit pattern and a fourth pit wobble pattern (Paragraph 0088 where different data is recorded according to different pit patterns in the LIM area).

Regarding claim 25, Shimoda discloses wherein the pattern comprising the sequence of pits provided in the burst cutting area is formed by a recording modulation

method different from a recording modulation method used to form pits in at least one of the lead-in area, the data area, and the lead-out area (Paragraphs 0088 and 0094 where the modulation method used to form pits in the BCA is different than the modulation method used to form pits in the other areas of the disc).

Regarding claim 27, Shimoda discloses wherein the recording modulation method used in the burst cutting area is different from the recording modulation method used in at least one of the lead-in area and the data area (Paragraphs 0088 and 0094 where the modulation method used to form pits in the BCA is different than the modulation method used to form pits in the other areas of the disc).

Regarding claim 28, Shimoda discloses wherein the recording modulation method used in the burst cutting area, the lead-in area, and user data area is one of a RLL (d,k) modulation method and a bi-phase modulation method (Figure 2 where both modulation methods are conventionally used to record data into the lead-in, data, and BCA areas).

Regarding claim 31, this claim recites limitations similar to those in claim 1 with the additional limitation of comprising a plurality of recording layers. Shimoda discloses said additional limitation in Paragraph 0165, which discloses a two-layer DVD-ROM. Thus, claim 31 is rejected for the reasons provided above in claim 1 in addition to Paragraph 0165.

Regarding claim 33, Shimoda discloses a reproducing apparatus (Figure 3) for use with a read-only optical information storage medium (Paragraph 0087) comprising a burst cutting area having a bar code (Figure 2A, Elements 4 and CM), a lead-in area

(Figure 2A, Element LIM) and a data area (Figure 2A, Element DAM), the apparatus comprising: a pickup which reads data from at least one of the burst cutting area, the lead-in area and the data area (Figure 3, Element 11a); and a controller which controls the pickup (Figure 3, Element 19); wherein the burst cutting area has a pattern comprising a sequence of pits that is repeatedly formed and the pattern comprising the sequence of pits is not the bar code (Paragraphs 0094-0096 and Figure 2A, Elements CM (which corresponds to a bar code) and repeated PT (which corresponds to a sequence of pits) are both present in the BCA area). Shimoda does not specifically disclose where the sequences of pits repeated in the BCA are identical patterns that are repeatedly formed. In the same field of endeavor, Ueda discloses an optical recording medium (Figure 1A), where identical control information data (represented by a series of pits) is repeatedly recorded in a specific area of the optical recording medium (Paragraphs 0038-0039).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide identical control information data being repeatedly recorded as disclosed by Ueda to the start information in the BCA of Shimoda (represented by PT), motivation being to allow for a re-read of specific start information in another area of the BCA when a first read operation fails, which results in a more reliable and efficient reading operation.

Regarding claim 34, Shimoda discloses a reproducing apparatus (Figure 3) for use with a read-only optical information storage medium (Paragraph 0087) comprising a burst cutting area having a bar code (Figure 2A, Elements 4 and CM), a lead-in area

(Figure 2A, Element LIM) and a data area (Figure 2A, Element DAM), the apparatus comprising: a pickup which reads data from at least one of the burst cutting area, the lead-in area and the data area (Figure 3, Element 11a); and a controller which controls the pickup to read the data in the burst cutting area according to a first modulation method and controls the pickup to read the data in the data area according to a second modulation method different from the first modulation method (Paragraphs 0088 and 0094 where the modulation method used to form pits in the BCA is different than the modulation method used to form pits in the other areas of the disc), wherein the burst cutting area has a pattern comprising a sequence of pits that is repeatedly formed and the pattern comprising the sequence of pits is not the bar code (Paragraphs 0094-0096 and Figure 2A, Elements CM (which corresponds to a bar code) and repeated PT (which corresponds to a sequence of pits) are both present in the BCA area). Shimoda does not specifically disclose where the sequences of pits repeated in the BCA are identical patterns that are repeatedly formed. In the same field of endeavor, Ueda discloses an optical recording medium (Figure 1A), where identical control information data (represented by a series of pits) is repeatedly recorded in a specific area of the optical recording medium (Paragraphs 0038-0039).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide identical control information data being repeatedly recorded as disclosed by Ueda to the start information in the BCA of Shimoda (represented by PT), motivation being to allow for a re-read of specific start information

in another area of the BCA when a first read operation fails, which results in a more reliable and efficient start operation.

Regarding claim 35, Shimoda discloses wherein the pattern comprising the sequence of pits provided in the burst cutting area is formed by a recording modulation method different from a recording modulation method used to form pits in at least one of the lead-in area, the data area, and the lead-out area (Paragraphs 0088 and 0094 where the modulation method used to form pits in the BCA is different than the modulation method used to form pits in the other areas of the disc).

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda in view of Ueda, as applied in claims 1, 7, 8, 25, 27, 28, 31, 33, 34, and 35 above, and further in view of Miyake et al. (hereafter Miyake)(US PgPub 2001/0053114).

Regarding claim 22, Shimoda discloses wherein the data area includes a plurality of basic recording units (Figure 2, Element DAM where data is recorded in basic recording units). Shimoda does not specifically disclose run-ins and run-outs are formed before and after the basic recording units. In the same field of endeavor, Miyake discloses a read-only optical recording medium (Title and Figure 4B) where data is recorded as basic recording units, and run-ins and run-outs are respectively located before and after the basic recording units (Figure 25 and Paragraph 0256).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the run-ins and run-outs as disclosed by Miyake before

and after the basic recording units of Shimoda, motivation being to accurately read data from the basic recording blocks.

Regarding claim 23, Shimoda discloses wherein the basic recording units are one of physical clusters, sectors, ECC blocks and frames (Figure 2, Element DAM where data is recorded in basic recording units).

Regarding claim 24, Miyake discloses wherein a pattern of pits formed in the basic recording units is identical to a pattern of pits formed in the run-ins and the run-outs (Figure 25 where data is formed in the same manner in all three of the run-in, data block, and run-out areas).

Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda in view of Ueda, as applied in claims 1, 7, 8, 25, 27, 28, 31, 33, 34, and 35 above, and further in view of Kondo (US PgPub 2003/0053404).

Regarding claim 29, Shimoda discloses wherein at least one of the burst cutting area, the lead-in area, the user data area, and the lead-out area is divided into a plurality of sub-areas (Figure 2A, LIM which is divided into a plurality of sub-areas). Shimoda does not disclose wherein the pits in the sub-areas are formed using different modulation methods. In the same field of endeavor, Kondo discloses where two different modulation methods are used in the same recording area (Paragraph 0081).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the modulation methods of Kondo to the sub-areas

in the recording medium of Shimoda, motivation being to selectively choose a proper modulation method based on the type of information to be recorded.

Regarding claim 30, Kondo discloses wherein the lead-in area comprises first and second sub areas, the first area uses one of the RLL(d,k) modulation method and the bi-phase modulation method (Paragraph 0094) and the second area uses a different recording modulation method from the first area (Paragraph 0081).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Senshu (US PgPub 2002/0060968) discloses a disk-like

recording medium with a BCA. Tomita et al (US PgPub 2003/0202436) discloses a recording disc and apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/
Examiner, Art Unit 2627

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627